604b Water Quality Management Planning Grant Program

Pre-RFR Informational Meeting

February 10, 2021

Agenda

- MassDEP Nonpoint Source Team Introductions (5 minutes)
- 604b Program Overview (15-30 minutes)
- Questions/Project Idea Discussion
  - Raise zoom hand (participants-> raise hand) or ask to be unmuted in chat
  - Please no chat questions, so all can hear questions
  - Will post presentation to grant webpage

Nonpoint Source Management

PLAN (WBP) | IMPLEMENT | PROTECT & RESTORE | REASSESS

Matthew Reardon | Patricia Arp | Meghan Selby | Malcolm Harper

- ✓ Water Quality Planning Grant Program (604b)
- ✓ Nonpoint Source Grant Program (319)

Nonpoint Source Pollution is unregulated overland runoff

- NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and groundwater.
- Unlike “point source” pollution from regulated industrial discharges and sewage treatment plants, NPS pollution comes from many diffuse sources.

Overview

- Section 604b of the Clean Water Act provides funding for watershed or sub-watershed based nonpoint source:
  - assessment
  - management
  - solution design
- Ultimate goal is to propose solutions to reduce pollutant loads necessary to meet or maintain state water quality standards.

Grant Program Goals

The goals of this grant program include, but are not limited to:

- Identify the sources of impairment to impaired waterbodies (waterbodies listed on the State's Integrated List of (Impaired) Waters (www.mass.gov/lists/integrated-lists-of-waters-related-reports).
- Remediate pollution impaired waterbodies and partially or fully restore segments not meeting the State Water Quality Standards.
- Support projects, such as watershed-based plans, implementation plans and BMP designs that they can be used as basis for future Section 319 projects.

Eligibility

- Regional Planning Agencies
- Council of Governments
- Counties
- Conservation Districts
- Cities and Towns
- Other substate public planning agencies and interstate agencies.
- Projects can be located in MS4 areas (Municipal Separate Storm Sewer System)

303(d): Impaired Waters List

- Biennial submission by states and tribes to EPA for review and approval
- List of waters currently not meeting water quality standards
- Most recent Integrated List of Waters for 2016: https://www.mass.gov/files/documents/2020/01/07/16ilwplist.pdf
- FY 2021 604b RFR used Recovery Potential Screening Tool and 2016 Integrated List to create list of priority waterbodies for NPS pollution remediation

Integrated List of Waters - Five Categories

- 1 – “Waters Attaining All Designated Uses
- 2 – “Waters Attaining Some Use But Not Assessed For All Uses”
- 3 – “No Uses Have Been Assessed”
- 4A (303d) – “Waters where TMDLs have Been Completed”
- 4B – “Impairment Controlled by Alternative Pollution Control Requirements
- 4C – “Waters Where an Impairment is NOT Caused by a Pollutant”
- 5 (303d) – “Waters Impaired and Requiring a TMDL”

Top Causes and Sources of Impaired Water Quality

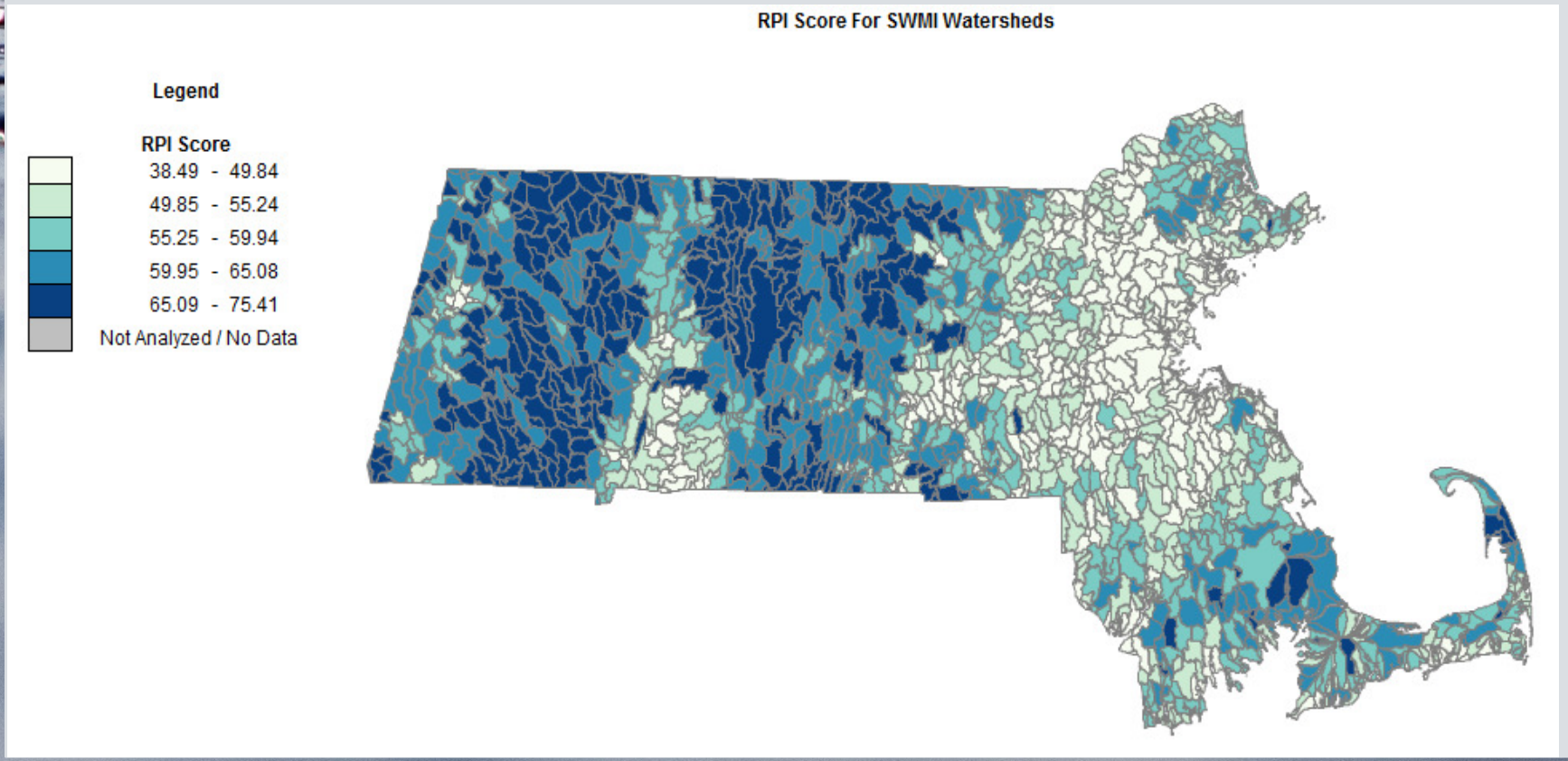
Causes		
Rivers	Lakes	Marine
Pathogens	Mercury	***Pathogens***
Nutrients	***Nutrients***	PCBs (fish Tissue)
Biology	***Low D.O.***	***Nutrients***
Low D.O.	Noxious Aquatic Plants	Biology

Sources		
Rivers	Lakes	Marine
Point Source	Atmospheric Deposition	Point & NPS wastewater (title 5)
Unknown	Unknown	***Stormwater***
Nonpoint sources (inc. stormwater)	***Nonpoint sources***	Legacy pollutants
Hydro	***Agriculture***	Recreational Boating

Priority Waterbodies and Watersheds

Proposed projects in the select areas will be viewed by the MassDEP grant team as a higher priority for funding:

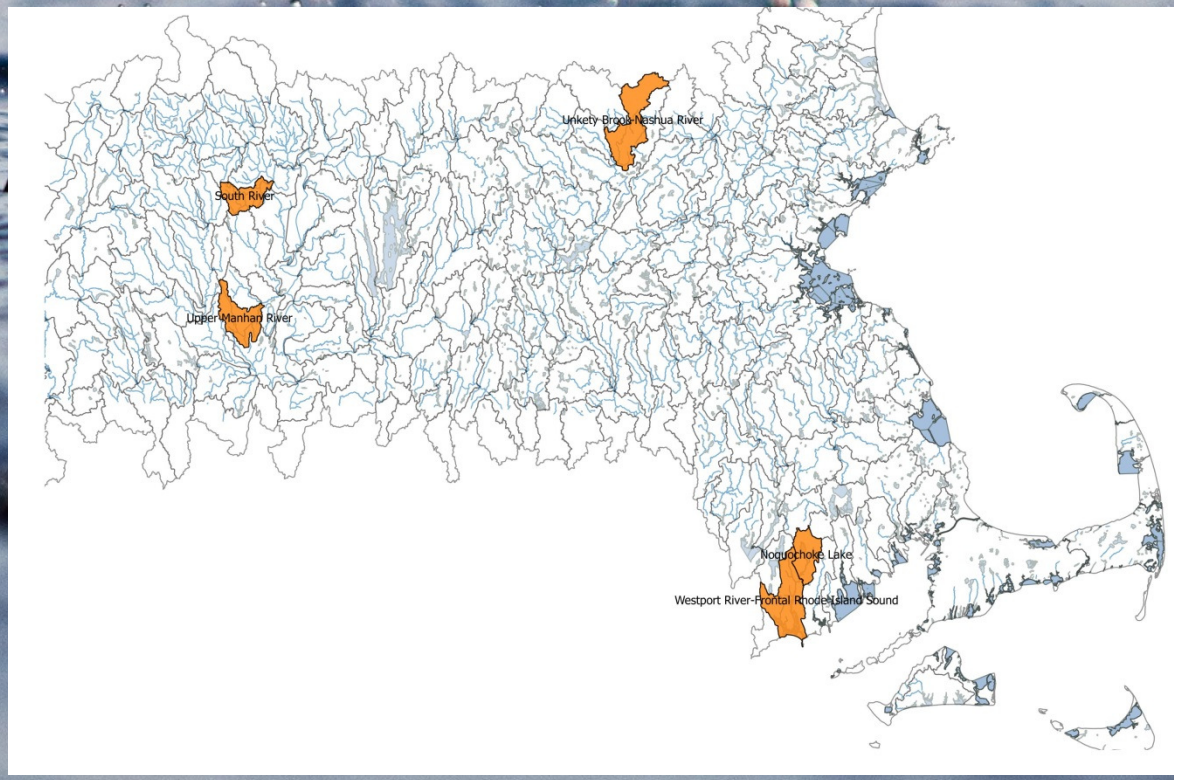
- Waterbodies identified in RFR as Priority Segments.



Priority Waterbodies and Watersheds

Waterbodies in the following National Water Quality Initiative (NWQI) HUC12 watersheds:

- Unkety Brook-Nashua River Watershed (HUCID: 010700040402)
- Upper Manhan River (HUCID: 010802010608),
- South River (010802030501),
- Westport River Watershed (HUCID: 010900020501 and 010900020502).



Priority Waterbodies and Watersheds

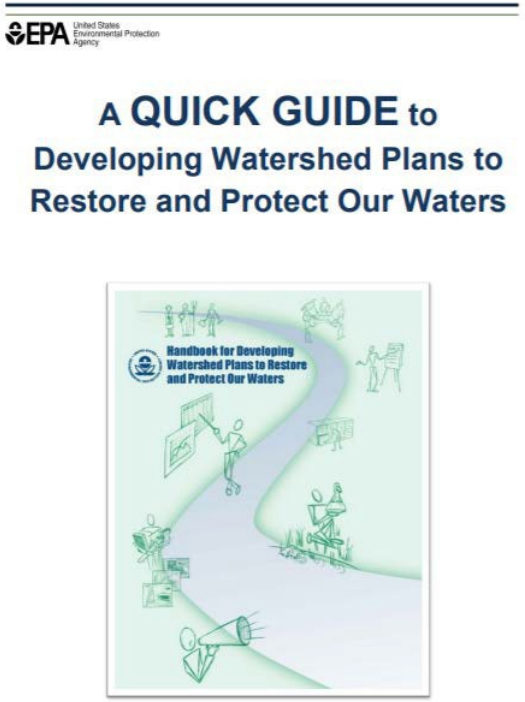
- Waters assessed as impaired for harmful algal blooms, in Category 5 of the Final 2016 Massachusetts Integrated List of Waters (available https://www.mass.gov/media/1638446/).
- Waterbodies identified in RFR with history of harmful algal blooms
- Waters in which Massachusetts Department of Health (MA DPH) issued a beach closure advisory due to harmful algal blooms within the last 5 years (with project areas located in areas with recent advisories considered highest priority)

FFY2021 604b Program Priorities

- Watershed-based Plans (319 requirement)
- Development of Implementation Plans and Preliminary Designs (up to 50%) that address water quality issues
- Healthy Waterbodies- Watershed-based Plans (RFR App G, Table 3)
- Water Quality Monitoring and Assessment
- Green Infrastructure and LID Projects

Watershed-based Plans

"Watershed plans provide an **analytic framework** for managing efforts to both **restore water quality** in degraded areas and to protect overall **watershed health**."



"Watershed plans assist states and tribes in addressing **nonpoint source pollution** by providing a comprehensive assessment of nonpoint source pollution and a set of **management measures** to address them."

Most Competitive Projects

- Support basin-wide water quality management activities
- Identify sources of water quality impairment due to nonpoint source pollution in high priority waterbodies
- Use watershed-based plans to build partnerships and build capacity as well as identify water quality remediation or protection strategies in high priority waterbodies.
- Link the proposed Best Management Practice (BMP) to the pollutant of concern and impact to targeted water resources
- Provide clearly defined, practical, and cost effective objectives
- Propose strategies with a high likelihood of success
- Consider long-term resiliency to climate change impacts in site prioritization, design, siting, and selection of BMPs.

Recent Projects - Lakes

- Eutrophication and Aquatic Plant Management in Massachusetts: Final Generic Environmental Impact Report
- 2019 Grantees

Year	Project #	Project Name	Grantee
2015	15-04	P sources for Hummock & Miacomet Ponds	Nantucket
2016	16-01	Nurient Loading to Lake Garfield	Town of Monterey
2019	19-01	Lake Mansfield – Beach Parking Area Stormwater Planning	Town of Great Barrington
2019	19-04	Forest Lake Watershed Assessment	Town of Palmer
2019	19-06	Lake Ellis Watershed Survey	Town of Athol

Recent Projects - Rivers

- Indicative Summaries

Year	Project #	Project Name	Grantee
2015	15-03	Manahan River Water Quality	Pioneer Valley Planning Commission
2016	16-02	Documenting Bacterial Improvements in the Hoosic & Housatonic	Berkshire Regional Planning Commission
2017	17-01	Jones River Water Quality Assessment & Stormwater BMP Designs	Kingston
2018	18-03	Nutrient sampling in the Connecticut River Watershed	Pioneer Valley Planning Commission

General Application Advice

- **Understand the Problem-** You have to understand the nonpoint source pollution problem.
  - Clearly outline problem (why, what, where)
  - Identify and discuss the specific impairment from the 2016 Integrated List of Waters (e.g. Bacteria, Nutrients, Exotic Plants)
  - Review past studies, data, etc. and **provide summary in your Proposal** (Assessment needs – DEP's Watershed Assessment Reports)
  - Locus map & detailed map of project area
- **Devising a Plan-**
  - Clearly outline goals and approach (who, how, when)
  - Has a problem related to yours been solved before?
  - Clearly connect the "solution" to the "problem"
  - Show rationale for location and BMP selection and /or sampling locations
  - Work within the timeline

General Application Advice

- Assume the reviewer is not familiar with the project
- Pay attention to evaluation criteria (RFR Section 5A)
- **Budget** – Salary (list staff and salary range), SubContracts, Equipment/Supplies, Mileage ($0.45 per mile) Only – no “Travel”
- **QAPPs required** for all Assessment & Modeling work. Recommend checking with Lab to determine detection levels. How low can they go??
- **Preliminary Designs** – Eligible up to 50% Design level – **No Construction**
- **Disdvantage Business Enterprise (DBE)** - Grantee will make good faith effort meet 4.2% DMBE and 4.5% DWBE goals. See RFR section 5B-Requirements For Application Structure and Content

Funding

- $220,000 total
- $25,000-$50,000 per award
  - 4-6 proposals selected each year
- Match is not required but preferred
- D/MBE goal 4.2% and D/WBE goal 4.5%
- Approximately two year duration
- Reimbursement basis
- 10% retainage is withheld

Procurement Schedule

- Request for Responses issued mid-February
  - Posted on COMMBUYS, MassDEP website, and email blast
  - Once RFR is issued no project specific communication allowed.
- Proposals are due April 14, 2021
- Selection process
- Applicants notified in July/August 2021
- Contract start date in autumn 2021

Additional Resources

1) Massachusetts 2016 Integrated List of Waters, Asessment Reports , Draft and Final TMDL analyses: http://www.mass.gov/eea/agencies/massdep/water/watersheds/total-maximum-daily-loads-tmdls.html#2

2) Technical Memoranda: MassDEP water quality monitoring efforts are reflected in these technical memoranda.

3) Water Quality Monitoring Data: Quality-assured water quality monitoring data and GIS coverages of sampling locations.

4) Watershed-based Planning Tool

The WBP will guide a user to select a watershed and complete the nine elements necessary to comprise a watershed-based plan: http://prj.geosyntec.com/MassDEPWBP

- WBP-tool Element Specific Guidance
- WBP-Tool Provisional Review Checklist and Rating Scoresheet
- Example Completed WBPs

5) The Clean Water Toolkit

A manual in electronic format that provides an overview of nonpoint source related issues, fact sheets and detailed information about best management practices to address nonpoint source problems: http://prj.geosyntec.com/npsmanual/default.aspx

Additional Resources (continued)

6) Examples of Past Projects (Indicative Summaries)

https://www.mass.gov/doc/s604b-water-quality-management-planning-project-summaries-ffy1998-2018/download

7) Stormwater:

- MA Stormwater Handbook
- EPA Opti Tool (Cost Information)
- MWC BMP Cost Catalog
- *University of New Hampshire Stormwater Center* - : http://www.unh.edu/unhsc/
- *Stormwater Policy and General Publications* http://www.mass.gov/eea/agencies/massdep/water/wastewater/stormwater.html
- *Cornell Extreme Precipitation Analysis* - website, providing rainfall analysis calibrated to the present climate: http://precip.eas.cornell.edu/
- *Funding Opportuities:* https://www.mass.gov/service-details/available-funding-for-stormwater-projects-in-massachusetts

Questions?

MassDEP Grants Website:

https://www.mass.gov/info-details/grants-financial- assistance-watersheds-water-quality

604b Program Managers:

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Meghan Selby

Disadvantaged Business Enterprise Goals

Grant recipients and their subcontractors must meet the appropriate federal "Fair Share" Disadvantaged Business Enterprise (DBE) and Affirmative Action requirements. Minority Business Enterprises (MBE) and Women Business Enterprises (WBE) who are also certified as DBE should be utilized to meet the Fair Share goals. These goals are 4.2% D/MBE and 4.5% D/WBE of the total project cost. The Supplier Diversity Office (SDO) has certified approximately 950 DBEs.

Additional information and access to the certified DBE database is available at: https://www.mass.gov/supplier-diversity-office.

CZM 2006 O&M Report: Recommendations for improving stormwater BMPs

- Recommendations for Improved Maintenance
  - 1. Avoid installing underground stormwater systems within the travel lanes of a roadway.
  - 2. Select surface stormwater BMPs over subsurface treatment systems.
  - 3. Equip all recharge chamber fields and other BMPs with adequate access for cleaning and maintenance.
  - 4. Install manhole risers and covers to grade.
  - 5. Provide adequate access to the inlet and outlet control structures of all BMPs.
  - 6. Design BMPs so that maintenance efforts can be focused on a smaller number of structures at a greater frequency
- Recommendations for Improved Siting and Design
  - 7. Equip all catch basins and water quality chambers with hoods at all outlet pipes.
  - 8. Ensure that drainage collection structures are constructed in the stormwater flow line (i.e., stormwater runoff will be captured by the practice).
  - 9. Incorporate flow diversion structures in system designs to bypass large storms around stormwater treatment systems.
  - 10. Employ practices that provide stormwater collection and surface treatment prior to discharge in areas with shallow groundwater and/or tight soils (i.e. forebay, bioretention systems, swales, channels, constructed wetlands, etc.).
  - 11. Employ surface stormwater practices in situations where the roadway grades are topographically too low to collect and convey stormwater to an underground infiltration system.
  - 12. Install velocity dissipation devices (i.e. rip rap, and stilling basins) at all outfalls to reduce downstream erosion.
- Recommendations for Improved Construction Practices
  - 13. Remove all temporary erosion control devices following site stabilization.
  - 14. Provide adequate time for vegetation to establish following construction of vegetated treatment devices.